

8th Grade Technology
MYP Level 3

Course Description:

The eighth grade technology course builds upon the foundations established in both sixth and seventh grades. Students will continue to utilize the design cycle and computer applications to create solutions to problems they have identified. Students will also explore new developments in technology and the implications these will have on their lives.

This course is structured into the three main branches of MYP technology: information, materials, and systems. Students will explore advanced concepts in databases and hypermedia. They will also explore new online tools and analyze their role in an online environment.

Aims:

The aims of this course are to encourage and enable students to:

- develop an appreciation of the significance of technology for life, society and the environment
- use knowledge, skills and techniques to create products/solutions of appropriate quality
- develop problem-solving, critical and creative-thinking skills through the application of the design cycle
- use and apply ICT effectively as a means to access, process and communicate information, and to solve problems

Objectives:

By the end of this course students will be able to:

- master keyboarding skills including shortcut key strokes
- utilize the design cycle to create solutions to problems (Investigate, Plan, Create, Evaluate)
- responsibly use online resources
- evaluate new resources and information for accuracy and usefulness
- explore and utilize a variety of technology tools
- implement search strategies to maximize efficiency
- refine application skills
- create web pages
- increase one's understanding of the Internet
- integrate tools associated with word processing, spreadsheets, databases, and multimedia into their learning

Student Resources:

All students will utilize sections of the Prentice Hall Technology Education Learning by Design and the Technology Applications Student Workbook. Students will also access new resources and applications via the internet.

Role of the Areas of Interaction:

Human Ingenuity: Students will explore the many inventions, discoveries, and advances in technology which has allowed for the evolution of our society.

Environment: Students will analyze the significance of appropriate and ethical online usage. They will also explore the characteristics of an online environment and the implications that has on society both socially and economically.

Approaches to Learning: Students will learn how to use computer applications to assist in the everyday learning and improve upon their organizational skills. They will also explore new tools which allow for global communications.

Community and Service: Students will be encouraged to identify local needs within the school and local community. They will then have the opportunity to plan, create, and implement a technological solution.

Health and Social Education: Students will evaluate the impact technology has on the social development of teens today.

Methodology:

The basic concept of our technology curriculum is to create an appreciation for the advantages technology can provide within a society. By introducing the three branches of technology: information, materials and systems, students are expected to develop an interdependence between technology and their other areas of study.

Topics:

- Advanced Computer Skill Development
- Multimedia vs. Hypermedia
- Advanced Databases
- Changes in Technology

Assessment:

Students will be assessed utilizing the IB criteria of investigate, design, plan, create, evaluate, and attitudes in technology. Students will also receive standard numerical grades on homework assignments, quizzes and tests. Projects will be assessed with both a standard rubric and the IB criterion. All IB assessments will focus upon each student's potential and their ability to demonstrate their comprehension of the subject matter.

Criterion	Maximum	Assessment Methods
A – Investigate	6	Written and oral explanations, rubrics
B - Design	6	Oral presentations, written samples/drawings, multimedia presentations

Criterion	Maximum	Assessment Methods
C - Plan	6	Written quizzes/tests, oral and visual presentations
D - Create	6	Project samples, photographs, video, written records, etc.
E – Evaluate	6	Reflection, self-assessment, recognize reasons for success/failure in design process
F – Attitudes in technology	6	Self and peer assessments, rubrics

Curriculum Map

Year 1 - Sixth Grade	Year 2 - Seventh Grade	Year 3 - Eighth Grade

<p>Basic Technology Skills (Systems)</p> <ul style="list-style-type: none"> - keyboarding basics: home row, proper stroke techniques, etc. - introduce proper citation techniques - introduce copyrights and fair use policy - AOI: ATL 	<p>Skill Development (Systems)</p> <ul style="list-style-type: none"> - developing keyboard efficiency - keyboard mastery: specialty keys and shortcut keys - proper work documentation - review copyrights and fair use policy - review of design cycle - AOI: ATL 	<p>Advanced Skill Development (Systems)</p> <ul style="list-style-type: none"> - keyboarding for speed & efficiency - using modern applications - review copyrights & fair use policy - MLA citing - AOI: ATL
<p>The Design Cycle (Information, materials, systems)</p> <ul style="list-style-type: none"> - identifying the process - utilizing the model to complete tasks given by instructor - implement the steps of the cycle to create a solution to a student problem - complete design cycle project of choice - AOI: ATL & HI 	<p>Exploring Multimedia (Information, materials, systems)</p> <ul style="list-style-type: none"> - master basic skills of PowerPoint - introduce new tools/applications which can be integrated with PowerPoint - develop presentations to assist in oral explanations - utilizing telecommunication tools - AOI: C&S, ENV 	<p>Multimedia vs. Hypermedia (Information, materials)</p> <ul style="list-style-type: none"> - identifying differences - creating products to fulfill needs - open vs. closed source software - AOI: C&S and HI
<p>Introduction to Multimedia (Information)</p> <ul style="list-style-type: none"> - define multimedia - learn functions and basic skills associated with PowerPoint: inserting images, custom animation, hyperlinks, etc. - discuss advantages/disadvantages of multimedia software - develop individual slides to assist in presentations - AOI: C&S 	<p>Advanced applications (Information, materials, systems)</p> <ul style="list-style-type: none"> - utilizing office applications to compete assignments in all subject areas - advanced spreadsheets: formulas, functions, charts, graphs, etc. - introduction to databases: terminology and purpose - identifying needs for new applications based on technological advancements - developing solutions - AOI: HI & ATL 	<p>Advanced Databases (Systems, information)</p> <ul style="list-style-type: none"> - database creation and management - exploring needs and business uses of databases - ethical issues involving data management - AOI: ATL, ENV
<p>Introduction of Computer Applications (Information)</p> <ul style="list-style-type: none"> - defining applications - recognizing user need for applications - introductions to spreadsheets: basic terminology and purpose - utilizing applications to support learning in other classes - mastery of word processing: formats, layouts, tables, etc. - AOI: H&S 	<p>Online Resource Management (Systems)</p> <ul style="list-style-type: none"> - introduction to online tools - virtual networking - identifying critical issues with online use - identifying different web sites (.com, .edu., .org, etc.) - AOI: H&S 	<p>Changes in Technology (Materials, Information, & Systems)</p> <ul style="list-style-type: none"> - evolution of technology - application of spreadsheets, charts, graphs, etc. - utilizing new tools: wikis, podcasts, blogs, etc. - analyzing web sites - web page creation - managing an online identity - AOI: H&S
<p>Introduction to the Web (System)</p> <ul style="list-style-type: none"> - online safety - web searching techniques - the Internet as a communication tool - impact and implications of a technologically connected world - AOI: ENV 		

